

# The Ecological Development of Yura-Oishi Research Village in the Southern Area of Sumoto City

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## 1. Outline of Yura-Oishi Research Village

Yura-Oishi Research Village ranges 5000ha area consisting of southern area of Sumoto City facing to Kitan-Kaikyo Strait and its coastal area (see Fig.1). There are flourish terrestrial and marine natural environment, and local community (about 5000 people) which has been co-living with nature.

At Yura-Oishi Research Village, environmental research toward the development harmonizing with organisms and ecosystems (which is called Ecological Development), research communication, environmental education and study, establishment of environmental management system, and exploitation of new industry making environment effective etc., have been actively performed from 1994. These activities are based on cooperation of residents and researchers from university and so on, and on backup from the administration (see Fig.2).

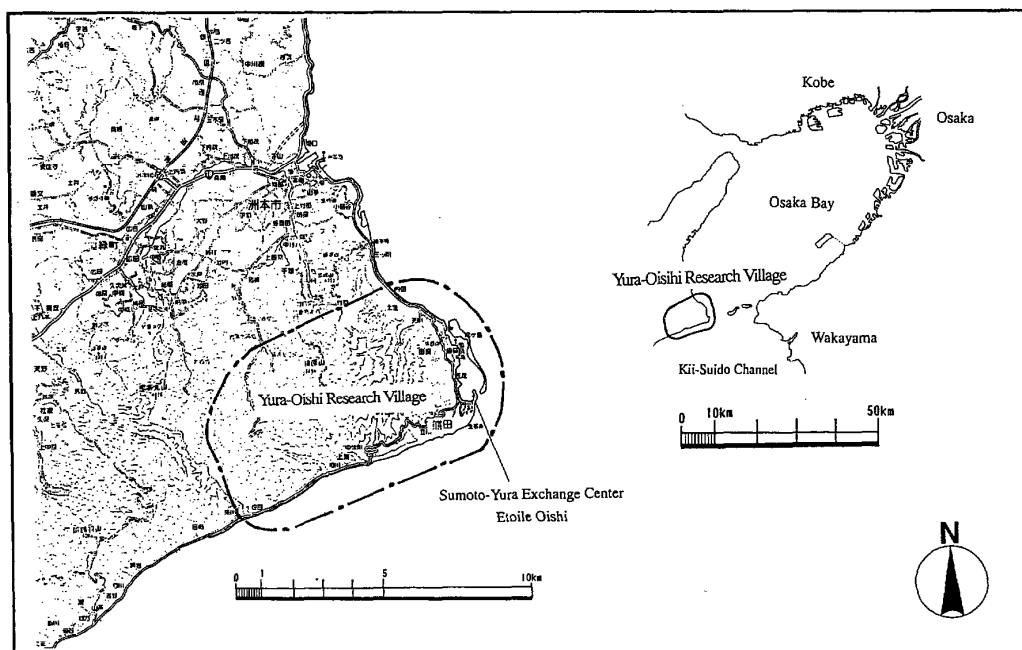


Figure 1. Location and range of Yura-Oishi Research Village

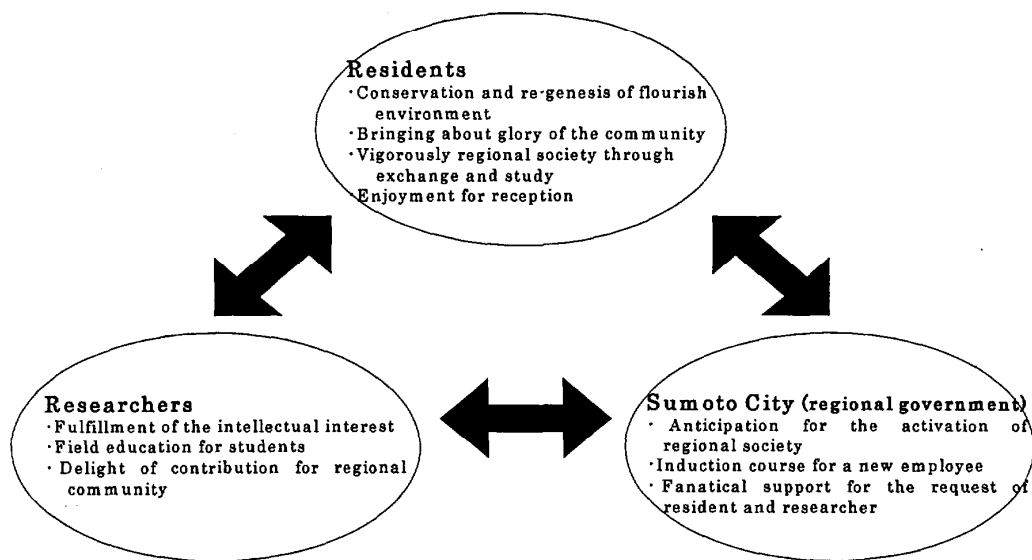


Figure 2. Cooperations based on confidence between residents, researchers and regional government

In April 1999, Sumoto-Yura Intellectual Exchange Center: Etoile Oishi was open up. This facility is core of the Yura-Oishi Research Village and equipped with conference room, accommodation, and dining hall etc. And then, Yura-Oishi Research Village Organizing Council was founded by the residents, the researchers, and the administration. At the same time, international symposium titled as "For the Ecological Development of the Coastal Zone" was held and "Yura-Oishi Declaration: For the Ecological Development of the Coastal Zone" was presented.

There was background for the development of Yura-Oishi Research Village. The residents hoped to change the worse regional situation caused by the decrease of younger people and the increase of the composition of older people, and by the stagnation of industry. They felt anxiety because of the decrease of the common opportunity to be concerned with neighbor mountain and coastal zone, and because of the environmental problem such as drifted rubbish from the depth area of Osaka Bay. On the other hand, the researchers wanted to put forward their environmental research, regarding this area as model case, because natural environment in this area was the most flourish of the Osaka Bay area.

The administration supported the residents and the researchers, then series seminar, whose theme was "Environment and Human", was started and the seminar has been continued to 47 times today. The residents and the researchers cooperated with each other and they investigated marine and terrestrial natural environment, held research exchange meeting such as international symposium, and promoted experience seminar attended also by urban dweller.

In Yura-Oishi Research Village, regional development, which is based on confidence between the residents, the researchers, and the regional government, is being put into practice. In this activity, sea and land are regarded as a united environmental area, and key wards are research, education, and study promising regional, broadly and internationally to be dispersed.

## **2. Concept and purpose of the Development of Yura-Oishi Research Village**

At the development of Yura-Oishi Research Village, we should cope with the deterioration of regional activity and the environmental problem, and recognize its role of broad environment model, and then “Ecological development” is set up as concept of the development of Yura-Oishi Research Village.

For the sake of this concept, the following programs are demanded. To actively research regional environment on the basis of broad cooperation of the residents and the researchers, to seek out the concrete plan for sustainable and regenerative environment according to that research, to offer the place for environmental education and study so as to enhance the children’s and citizen’s awareness in this region and extensive area, and to exploit new industry which effectively utilize the environment. These are the purpose of the development of Yura-Oishi Research Village

## **3. Process of the Development of Yura-Oishi Research Village**

The development of Yura-Oishi Research Village was born when the academic researchers joining Research Committee on Osaka Bay Area Mega-Infrastructure visited southern part of Sumoto City to seek better environment model for the research on environmental creation of Osaka Bay Area. At that time, the researchers proposed Sumoto City mayor, who wanted to invite university, to create research exchange center utilizing flourish natural environment.

In response to above propose, Sumoto City set up “Sumoto-Yura Intellectual Exchange Center” at 3<sup>rd</sup> floor in Yura Branch Office of Sumoto City, and offered the space for the researchers of university and research institute in July 1994. At opening ceremony, the residents such as chairman of Yura-Community attended and talk with the researchers for the first time.

At August 1994. “Research Committee of Marine Environment” consisting of the researchers of Osaka Prefecture University, Osaka University, and Research Committee on Osaka Bay Area Mega-Infrastructure, was organized by the researchers visited southern part of Sumoto City in April. They could acquire the financial assistance from Nihon Seimei Foundation and commence “Environment General Investigative Research on the Southern Region of Sumoto City” using Sumoto-Yura Intellectual Research Center as the base of activity. From September, “Series Seminar: Environment and Human” was commenced. Then result of Environment General Investigative Research was reported at “Series Seminar: Environment and Human” and the residents and the researchers share information and common understanding for environmental problem. This situation has

been continuing.

In March 1995, Sumoto City published "Investigative Report on Invitation for University/Research Institute at Sumoto City". This report showed the arrangement plan which covered nearly 1000ha area centering Oishi area as Research/Exchange Zone including core facility.

In July 1995, the researchers proposed that Sumoto-Yura area should be arranged as a model area of sustainable development co-living with nature and be called "Yura-Oishi Research Village", when "Symposium: Intellectual Exchange Base —Toward the Creation of Awaji Island in 21<sup>st</sup> century" was held.

In October 1995, research area expanded to Kaminada area facing to Kii-Suido Channel because of the foundation of "Natural Environment Monitoring Research Committee" by the residents and the researchers in order to comprehend the ecology of wild deer and to consider its coexistence with human. So Yura-Oishi Research Village ranged 5000ha including land and sea.

In 1996, the researchers proposed "Guideline for Land Use of Research Village"(see Fig.3) and "Guideline for Environmental Management in Research Village"(see Fig.4) (January). Sumoto City designed "Basic Plan of Research Exchange Center"(March).

In July 1996, "Sumoto City: Marine International Symposium" was held and played effective role for regional consensus and broad the perception of the development of Yura-Oishi Research Village. At the session of the International Symposium, the warmest reception party was held by the residents.

And then, at Yura-Oishi Research Village, by cooperation between the residents and the researchers, research action toward symbiosis with nature and sustainable development, research communication, and education/study etc. have been continued (see Fig.5, Table 1, and Table 2).

And in April 1999, "Sumoto-Yura Exchange Center: Etoile Oishi" (seminar room, meeting room, and accommodation for 80 guests) was established at scenic site in front of Kitan-Kaikyo Strait and Yura Bay. This establishment reflected the ardor of the residents and the researchers and the effort of Sumoto City.

In 17 April 1999, Yura-Oishi Research Village Organizing Committee was founded. This committee has the purpose that the committee should show future prospect of Research Village, crystallize them, promote the exchange between residents and researchers or urban dwellers, and play a role of effective management of Research Village at a basis of the cooperation between the residents, the administrations, and the researchers etc.

In 18 April, the memory of the foundation of Sumoto-Yura Exchange Center, "International Symposium: For Ecological Development of the Coastal Zone" was held and Yura-Oishi Declaration for ecological development was published. This declaration is for coastal zone of the world, coastal zone of Osaka Bay Area, and Yura-Oishi Research Village.

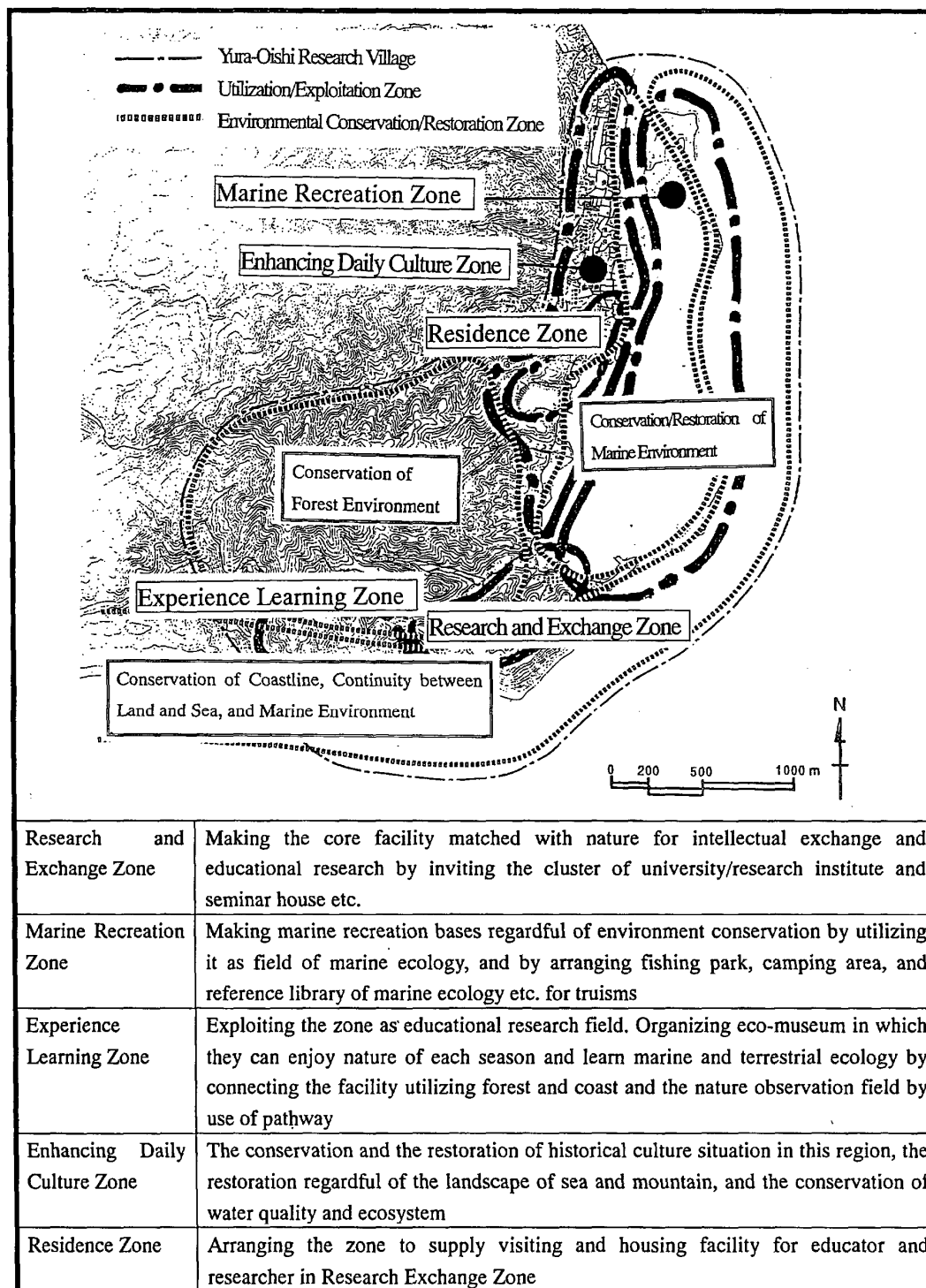


Figure 3. Grand plan of land use and activity at Yura-Oishi Research Village

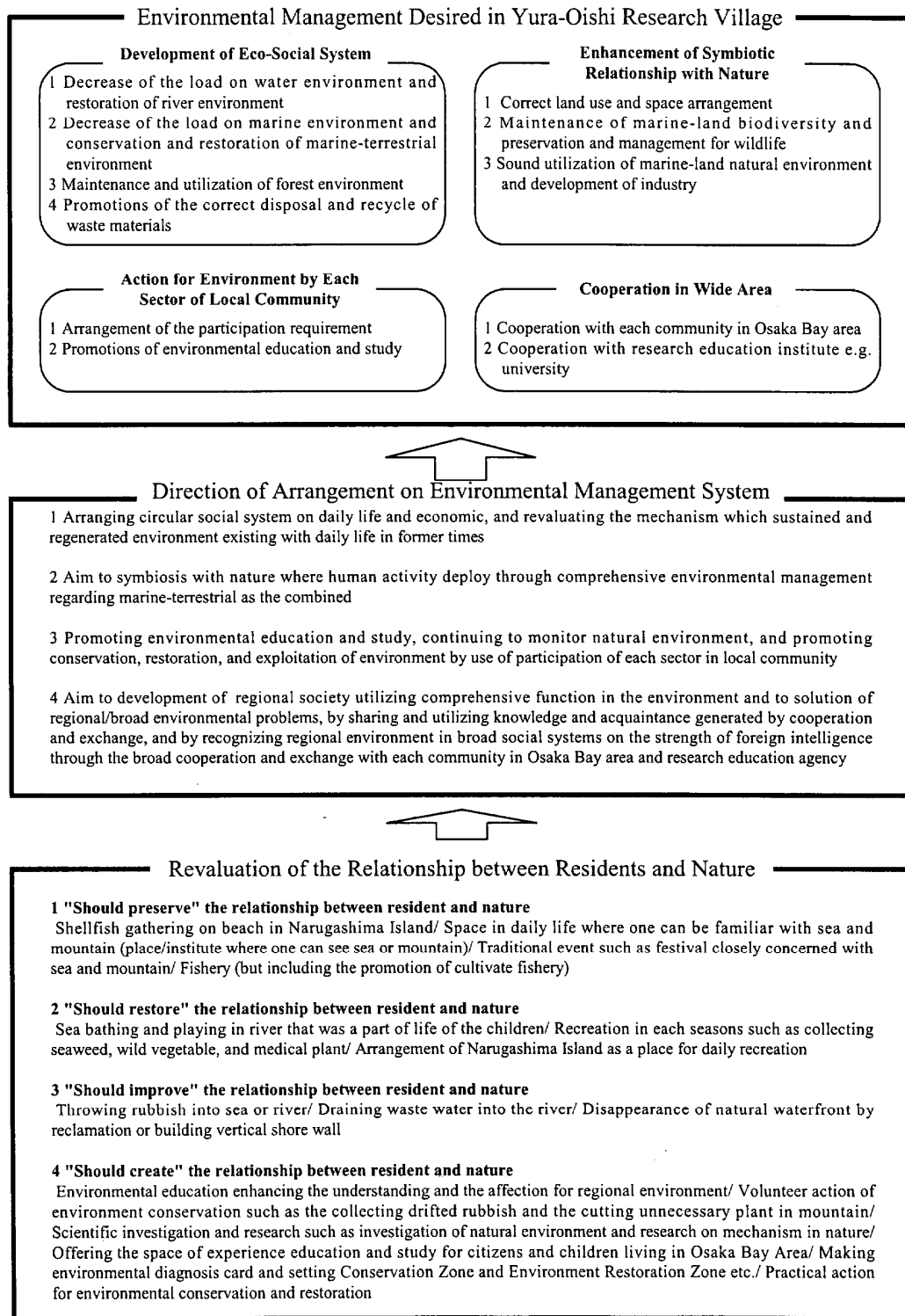


Figure 4. Outline of regional environment management systems at Yura-Oishi Research Village

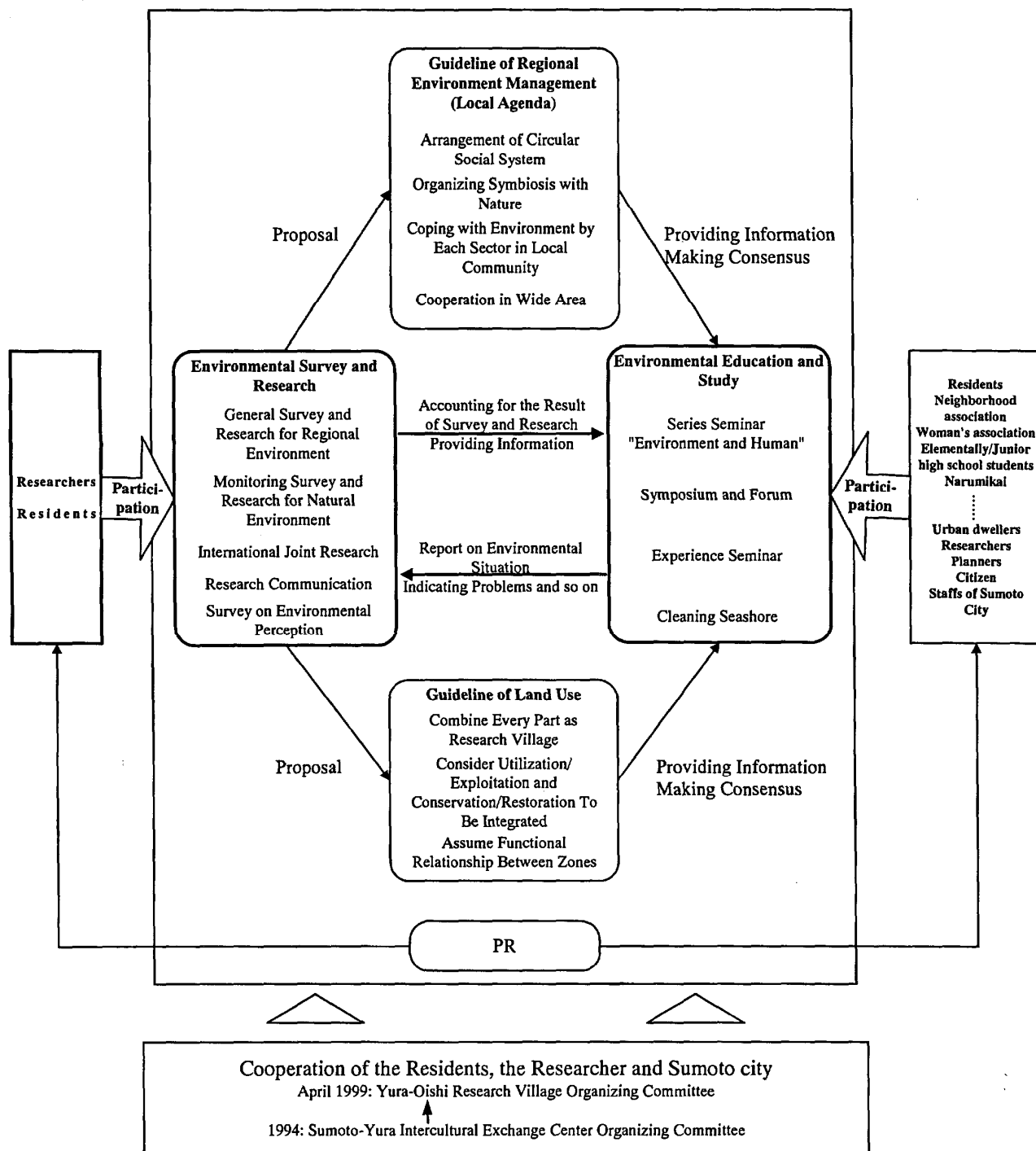


Figure 5. Environmental research, education, and management systems at Yura-Oishi Research Village

Table 1. Major constituents of surveys and researches on environment at Yura-Oishi Research Village

Classification	Aim on action	Organization for the action	Remarks
Comprehensive survey and research on regional environment	<ul style="list-style-type: none"> <li>• Comprehension of situation and characteristic of marine environment</li> <li>• Comprehension of the relationship between marine and terrestrial</li> <li>• Organizing environmental management system</li> </ul>	<ul style="list-style-type: none"> <li>• Research Committee of Marine Environment</li> <li>• Researcher and student of Osaka Prefecture University, Osaka University, Kyoto University, and Wakayama University</li> <li>• Research Committee on Osaka Bay Area Mega-Infrastructure</li> <li>• Yura Community, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• From August 1994</li> <li>• Large scale and comprehensive survey, 30-50 participants in every spring and autumn</li> <li>• Eastern part of Research Village is subjected</li> </ul>
Natural environment monitoring survey and research	<ul style="list-style-type: none"> <li>• Development of monitoring system for comprehension of the ecology of wild deer</li> <li>• Monitoring seaweed bed and so on</li> </ul>	<ul style="list-style-type: none"> <li>• Researcher (Osaka Prefecture University, Osaka University, Mukogawa Woman's College, Research Committee on Osaka Bay Area Mega-Infrastructure, etc.) and research committee consisting of the residents</li> </ul>	<ul style="list-style-type: none"> <li>• October 1995~March 1999</li> <li>• Western part of Research Village is subjected to the research on deer</li> </ul>
International joint research	<ul style="list-style-type: none"> <li>• Comprehension of seaweed bed ecosystem</li> <li>• Elucidation of mechanism on a combined marine and terrestrial environment</li> </ul>	<ul style="list-style-type: none"> <li>• Faculty of Marine System Engineering, Department of Engineering, Osaka Prefecture University</li> <li>• Nakahara Laboratory, Division of Agriculture, Graduate School, Kyoto University</li> <li>• Research Committee on Osaka Bay Area Mega-Infrastructure</li> <li>• West Vancouver Laboratory, Ministry of Fishery and Ocean, Canada</li> </ul>	<ul style="list-style-type: none"> <li>• From April 1994</li> </ul>

(Remark) Research Committee on Osaka Bay Area Mega Infrastructure in the table was reorganized into Non Profit Organization; Institute of Environmental Restoration/Creation on Osaka Bay Coastal Zone (in short: NPO Osaka Bay Institute) certificated by Economic Planning Agency of Japan in September 1999

Table 2. Major constituents of environmental educations and studies at Yura-Oishi Research Village

Name	Aim on action	Organization of action/management	Remark
Series Seminar "Environment and Human"	<ul style="list-style-type: none"> <li>• Resident and researcher learn together</li> <li>• From fiscal 1999, expand participant to urban dweller and also serve as a eco-tourism training course</li> </ul>	<ul style="list-style-type: none"> <li>• Fiscal 1994 ~ 1998 : Sumoto-Yura Intellectual Exchange Center Organizing Committee</li> <li>• Fiscal 1999 ~ : Yura-Oishi Research Village Organizing Committee</li> </ul>	<ul style="list-style-type: none"> <li>• Fiscal 1994 ~ 1998 : held 39 times</li> <li>• Fiscal 1999 : held 8 times</li> </ul>
Experience Seminar	<ul style="list-style-type: none"> <li>• Coming in contact with environment and learning about environment</li> <li>• Understanding the situation of drifted rubbish and cleaning seashore</li> </ul>	<ul style="list-style-type: none"> <li>• Yura-Oishi Research Village Organizing Committee</li> <li>• Student Council of Yura Junior High School</li> <li>• Faculty of Marine System Engineering, Department of Engineering, Osaka Prefecture University, etc.</li> </ul>	